

## Introduction to Statistics and Data Analysis

### *Correlation*

Part I. The table below contains data on microwave ovens found at [www.target.com](http://www.target.com).

Price (\$)	Watts
80	1100
80	700
50	700
90	1200
100	1200
90	1200
110	1200
90	1000
75	1000
80	1000
63	700

1. Enter the price and watt values into two lists in your calculator.
2. Obtain a scatterplot using Price as the X variable and Watts as the Y variable.  
Does the relationship appear to be  
Positive OR Negative?  
Linear OR Curved?  
Are there any unusual observations?

3. Compute the correlation.
  - If you have a TI-83/84, press **Stat** and select **Calc**.  
Choose **LinReg(a + bx)**. Press **Enter**.  
Indicate the the X and Y columns of data separated by a comma, e.g. L<sub>1</sub>, L<sub>2</sub>  
Press **Enter**.
  - If you have a TI-89, get into the Stat/List Editor. Select the **Calc** menu.  
Select Regressions, then **LinReg(a + bx)**  
Type the names of the X and Y columns of data where indicated.  
Press **Enter**.

---

**\*\*If this didn't work, press [2<sup>nd</sup>] Catalog. Scroll down to **DiagnosticOn**. Press **Enter**, then **Enter** again. THEN RE-DO STEP 3.**

---

r = \_\_\_\_\_

4. What does the value of r indicate about the relationship between Price and Watts?

Part II. Match the graphs to the correlations.

$r = 0$

$r = +0.3$

$r = -0.5$

$r = -0.7$

$r = +0.9$

$r = 0$

